

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re the Appellant:

Kalle TAMMI

Serial Number: 10/776,513

Filed: February 12, 2004



Appeal No.:

Group Art Unit: 2456

Examiner: NAJEE-ULLAH, TARIQ S

For: METHOD AND SYSTEM FOR DEACTIVATING A SERVICE ACCOUNT

BRIEF ON APPEAL

May 5, 2009

This is an appeal from the final rejection set forth in an Official Action dated September 3, 2008, ("the Final Office Action") finally rejecting claims 1-6, and 8-36, all of the claims pending in this application, as being unpatentable over 3<sup>rd</sup> Generation Partnership Project; Technical Specification Group Services and System Aspects; IP Multimedia Services (IMS); Stage 2 (Release 5)" 3GPP TS 23.228 V6.0.0, January 2003 ("3GPP"), in view of Kett et al. (U.S. Publication No. 2002/0194336) ("Kett"). A Request for Reconsideration was timely filed on December 1, 2008. An Advisory Action was issued on December 17, 2008, indicating that the request for reconsideration has been considered but did not place the application in condition for allowance. A Notice of Appeal was timely filed on January 5, 2009 with a petition for Extension of Time. A Notice of Panel Decision from Pre-Appeal Brief Review was issued on March 6, 2009, indicating that the rejection of claims 1-6 and 8-36 was maintained. This Appeal Brief is being timely filed with a petition for Extension of Time.

## I. REAL PARTY IN INTEREST

The real party in interest in this application is Nokia Siemens Networks Oy of Espoo, Finland, by virtue of an Assignment by Nokia Corporation, which assignment was recorded at Reel 020550, Frame 0001, on February 21, 2008. Nokia Corporation has received its interest by virtue of an Assignment by the inventors, recorded at Reel 014980, Frame 0456, on February 12, 2004.

## II. RELATED APPEALS AND INTERFERENCES

There are no known related appeals and/or interferences which will directly effect or be directly effected by or have a bearing on the Board's decision in this appeal.

## III. STATUS OF CLAIMS

Claims 1-6, and 8-36, all of the claims pending in the present application are the subject of this appeal. Claims 1-6 and 8-36 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over 3GPP in view of Kett. Claim 7 was previously cancelled by Appellants.

## IV. STATUS OF AMENDMENTS

All of claims 1-6 and 8-36 stand as they were previously presented prior to the Final Office Action. No amendments were made after the final rejection. Thus, claims 1-6 and 8-36 are pending and their respective rejections of claims 1-6 and 8-36 are appealed. A response was filed on December 1, 2008, and was entered, but the

response did not include any amendments to the claims.

## V. SUMMARY OF CLAIMED SUBJECT MATTER

Claim 1, upon which claims 2-6 are dependent, recites a method of deactivating a service account associated with an application server of a registered subscriber within a signaling network supporting internet protocol based services. (Specification at least at page 4, lines 11-13, page 7, lines 3-8, Figure 2). The method includes monitoring a status of a service account. (Specification at least at page 4, line 14, page 7, lines 8-9, Figure 2). The method further includes forwarding a request for de-registration from said application server via a direct interface to a registration server, which maintains a registration status of said subscriber, upon determining that disruption or termination of service is required. (Specification at least at page 4, lines 15-18, page 7, lines 9-12, Figure 2, "1. PUR"). The method further includes changing the registration status of said subscriber so as to de-register said subscriber at said registration server in response to said de-registration request. (Specification at least at page 4, lines 19-21, page 7, lines 12-14, Figure 2, "2. De-registration").

Claim 8, upon which claims 9-10 are dependent, recites a system for deactivating a service account of a registered subscriber within a signaling network supporting internet protocol based services. (Specification at least at page 4, lines 24-26, page 7, lines 3-8, Figure 2). The system includes a registration server configured to maintain a registration status of said subscriber. (Specification at least at page 4, lines 27-28, page 7, lines 6-7, Figure 2, "HSS 20"). The system further includes an application server, to which said service account is associated, configured to monitor a status of said service account and

to forward via a direct interface a request for de-registration to said registration server, upon determining that disruption or termination of service is required. (Specification at least at page 4, line 29 – page 5, line 3, page 7, lines 8-12, Figure 2, “AS 60”). The registration server is configured to change the registration status of said subscriber so as to de-register said subscriber in response to said de-registration request. (Specification at least at page 5, lines 4-7, page 7, lines 12-15, Figure 2, “HSS 20”).

Claim 11, upon which claims 12-14 and 18-19 are dependent, recites a method of deactivating a service account associated with an application server of a registered subscriber within a signaling network supporting internet protocol based services. (Specification at least at page 4, lines 11-13, page 7, lines 3-8, Figure 3). The method includes monitoring a status of said service account. (Specification at least at page 4, line 14, page 7, lines 8-9, Figure 3). The method further includes forwarding a request for barring from said application server via a direct interface to a registration server, which maintains a registration status of said subscriber, upon determining that disruption or termination of service is required. (Specification at least at page 4, lines 15-18, page 7, lines 9-12, Figure 3, “2. PUR”). The method further includes changing a barring indication of said subscriber so as to bar said subscriber at said registration server by changing said barring indication in response to said barring request. (Specification at least at page 4, lines 19-21, page 7, lines 12-14, Figure 3, “2. data update”).

Claim 15 recites a system for deactivating a service account of a registered subscriber within a signaling network supporting internet protocol based services. (Specification at least at page 4, lines 24-26, page 7, lines 3-8, Figure 3). The system includes a registration server configured to maintain a registration status of said

subscriber. (Specification at least at page 4, lines 27-28, page 7, lines 6-7, Figure 3 “HSS 20”). The system further includes an application server, to which said service account is associated, configured to monitor a status of said service account and to forward via a direct interface a request for barring to said registration server, upon determining that disruption or termination of service is required. (Specification at least at page 4, line 29 – page 5, line 3, page 7, lines 8-12, Figure 3, “AS 60”). The registration server is configured to change a barring indication of said subscriber to bar said subscriber in response to said barring request. (Specification at least at page 5, lines 4-7, page 7, lines 12-15; Figure 3, “HSS 20”).

Claim 16 recites a system for deactivating a service account associated with an application server of a registered subscriber within a signaling network supporting internet protocol based services. (Specification at least at page 4, lines 24-26, page 7, lines 3-8, Figure 2). The system includes monitoring means for monitoring a status of said service account. (Specification at least at page 7, lines 6-7, Figure 2, “AS 60”). The system further includes forwarding means for forwarding a request for de-registration from said application server via a direct interface to a registration server, which maintains a registration status of said subscriber, upon determining that disruption or termination of service is required. (Specification at least at page 7, lines 8-12, Figure 2, “AS 60” and “HSS 20”). The system further includes changing means for changing the registration status of said subscriber so as to deregister said subscriber at said registration server in response to de-registration request. (Specification at least at page 7, lines 12-15, Figure 2, “HSS 20”).

Claim 17 recites a system for deactivating a service account associated with an

application server of a registered subscriber within a signaling network supporting internet protocol based services. (Specification at least at page 4, lines 24-26, page 7, lines 3-8, Figure 3). The system includes monitoring means for monitoring a status of said service account. (Specification at least at page 7, lines 6-7, Figure 3, "AS 60"). The system further includes forwarding means for forwarding a request for barring from said application server via a direct interface to a registration server, which maintains a registration status of said subscriber, upon determining that disruption or termination of service is required. (Specification at least at page 7, lines 8-12, Figure 3, "AS 60" "HSS 20"). The system further includes changing means for changing a barring indication of said subscriber so as to bar said subscriber at said registration server by changing said barring indication in response to said barring request. (Specification at least at page 7, lines 12-15; Figure 3, "HSS 20").

Claim 20, upon which claims 21-24 are dependent, recites a method of deactivating a service account associated with an application server of a registered subscriber within a signaling network supporting internet protocol based services. (Specification at least at page 4, lines 11-13, page 7, lines 3-8, Figure 2). The method includes monitoring a status of a service account. (Specification at least at page 4, line 14, page 7, lines 8-9, Figure 2). The method further includes forwarding a request for de-registration from said application server via a direct interface to a registration server upon determining that disruption or termination of service is required. (Specification at least at page 4, lines 15-18, page 7, lines 9-12, Figure 2, "1. PUR"). The registration server maintains a registration status of said subscriber. (Specification at least at page 4, lines 15-18, page 7, lines 9-12, Figure 2, "1. PUR," "HSS 20"). The registration server

changes said registration status of said subscriber so as to de-register said subscriber at said registration server in response to said de-registration request. (Specification at least at page 4, lines 19-21, page 7, lines 12-14, Figure 2, "2. De-registration," "HSS 20").

Claim 25, upon which claim 26 is dependent, recites a method of deactivating a service account associated with an application server of a registered subscriber within a signaling network supporting internet protocol based services. (Specification at least at page 4, lines 11-13, page 7, lines 3-8, Figure 2). The method includes receiving from said application server via a direct interface a request for de-registration at a registration server, which maintains a registration status of said subscriber. (Specification at least at page 4, lines 15-18, page 7, lines 9-12, Figure 2, "1. PUR," "HSS 20"). The method further includes changing the registration status of said subscriber so as to de-register said subscriber at said registration server in response to said de-registration request. (Specification at least at page 4, lines 19-21, page 7, lines 12-14, Figure 2, "2. De-registration," "HSS 20").

Claim 27, upon which claims 28-29 are dependent, recites a method of deactivating a service account associated with an application server of a registered subscriber within a signaling network supporting internet protocol based services. (Specification at least at page 4, lines 11-13, page 7, lines 3-8, Figure 3). The method includes monitoring a status of said service account. (Specification at least at page 4, line 14, page 7, lines 8-9, Figure 3). The method further includes forwarding a request for barring from said application server via a direct interface to a registration server upon determining that disruption or termination of service is required. (Specification at least at page 4, lines 15-18, page 7, lines 9-12, Figure 3, "2. PUR"). The registration server

maintains a registration status of said subscriber. (Specification at least at page 4, lines 15-18, page 7, lines 9-12, Figure 3, "2. PUR," "HSS 20"). The registration server changes a barring indication of said subscriber so as to bar said subscriber at said registration server by changing said barring indication in response to said barring request. (Specification at least at page 4, lines 19-21, page 7, lines 12-14, Figure 3, "2. data update").

Claim 30, upon which claim 31 is dependent recites, a method of deactivating a service account associated with an application server of a registered subscriber within a signaling network supporting internet protocol based services. (Specification at least at page 4, lines 11-13, page 7, lines 3-8, Figure 3). The method includes receiving from said application server via a direct interface a request for barring to a registration server, which maintains a registration status of said subscriber. (Specification at least at page 4, lines 15-18, page 7, lines 9-12, Figure 3, "2. PUR," "HSS 20"). The method further includes changing a barring indication of said subscriber so as to bar said subscriber at said registration server by changing said barring indication in response to said barring request. (Specification at least at page 4, lines 19-21, page 7, lines 12-14, Figure 3, "2. data update").

Claim 32, upon which claim 33 is dependent, recites a registration server for deactivating a service account of a registered subscriber. (Specification at least at page 7, lines 3-8, Figure 2, "HSS 20"). The registration server includes a storage configured to maintain a registration status of said subscriber. (Specification at least at page 7, lines 4-5, Figure 2, "HSS 20"). The registration server further includes an updating unit configured to change the registration status of said subscriber so as to de-register said



subscriber in response to a de-registration request forwarded from an application server via a direct interface to said registration server (Specification at least at page 7, lines 9-13, page 7, line 20 – page 8, line 3, Figure 2, 'HSS 20").

Claim 34 recites a registration server for deactivating a service account of a registered subscriber. (Specification at least at page 7, lines 3-8, Figure 2, "HSS 20"). The registration server includes means for maintaining a registration status of said subscriber. (Specification at least at page 7, lines 4-5, Figure 2, "HSS 20"). The registration server further includes means for changing the registration status of said subscriber so as to de-register said subscriber in response to a de-registration request forwarded from an application server via a direct interface to said registration server. (Specification at least at page 7, lines 9-13, page 7, line 20 – page 8, line 3, Figure 2, 'HSS 20").

Claim 35 recites an application server for deactivating a service account of a registered subscriber. (Specification at least at page 7, lines 3-6, Figure 2, "AS 60"). The application server includes a forwarding unit configured to forward a request for de-registration from said application server via a direct interface to a registration server, upon determining that disruption or termination of service is required. (Specification at least at page 7, lines 9-12, page 7, lines 18-24, Figure 2, "AS 60").

Claim 36 recites an application server for deactivating a service account of a registered subscriber. (Specification at least at page 7, lines 3-6, Figure 2, "AS 60"). The application server includes means for monitoring a status of said service account. (Specification at least at page 7, lines 9-10, Figure 2, "AS 60"). The application server further includes means for forwarding a request for de-registration from said application

server via a direct interface to a registration server, upon determining that disruption or termination of service is required. (Specification at least at page 7, lines 9-12, page 7, lines 18-24, Figure 2, "AS 60").

## VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The grounds of rejection to be reviewed on appeal are the rejection of claims 1-6 and 8-36 under 35 U.S.C. § 103(a) as allegedly being unpatentable over 3GPP in view of Kett. As will be discussed below, this rejection is in error, and claims 1-6 and 8-36 should all be found to meet the U.S. requirements for patentability under 35 U.S.C. § 103.

## VII. ARGUMENT

Appellants respectfully submit that each of the pending claims 1-6 and 8-36 recites patentable subject matter that is not taught, disclosed, or suggested by the cited art. Each of the claims is being argued separately, and thus, each of the claims stands or falls alone.

In the Final Office Action, claims 1-6 and 8-36 were rejected under 35 U.S.C. § 103(a) as being unpatentable over 3GPP in view of Kett. Appellants submit that each of claims 1-6 and 8-36 recite subject matter that is not obvious in light of 3GPP and Kett, and as such, the Board's reversal of the rejection is respectfully requested.

### i) Claim 1

Claim 1, upon which claims 2-6 are dependent, recites a method of deactivating a service account associated with an application server of a registered subscriber within

a signaling network supporting internet protocol based services. The method includes monitoring a status of a service account. The method further includes forwarding a request for de-registration from said application server via a direct interface to a registration server, which maintains a registration status of said subscriber, upon determining that disruption or termination of service is required. The method further includes changing the registration status of said subscriber so as to de-register said subscriber at said registration server in response to said de-registration request.

Applicants respectfully submit that 3GPP and Kett, whether considered individually or in combination, fail to disclose, or suggest, all the elements of claim 1.

3GPP identifies a stage-2 service description for a Internet Protocol (IP) Multimedia Core Network Subsystem (IMS), including the elements necessary to support IP Multimedia (IM) services in UMTS. ITU-T Recommendation I.130 describes a three-stage method for characterization of telecommunication services, and ITU-T Recommendation Q.65 defines stage 2 of the method. 3GPP identifies the mechanisms to enable support for IP multimedia applications. (See 3GPP at “Scope”).

Kett describes a registration server implementing an application programming interface (API) which authenticates services and provides discover of network resources, prior to registering services with selected network resources. Specifically, with respect to Figure 4, Kett describes the interfaces between components of the network implementing the Parlay interface. The interface is object-oriented and is implemented using service interfaces and framework interfaces. The service interfaces of application provide access to the capabilities of the network. The framework interfaces provide a surround for the service interfaces and implements processes of authentication, discovery, and

registration. There is a direct interface 4.2 between client applications and Parlay services. The direct interface is only accessed after an application has signed-on via the framework interface 4.1. (See Kett at Abstract and paragraph 0030).

The Final Office Action took the position that 3GPP discloses all the elements of claim 1, with the exception of “connecting from an application server to a registration server via a direct interface.” The Final Office Action then cited Kett as allegedly curing the deficiencies of 3GPP. (See Final Office Action at pages 3-4). Appellants respectfully submit that the rejection is erroneous because, as will be discussed in further detail, 3GPP and Kett, whether considered individually or in combination, fail to disclose, or suggest, at least, *“forwarding a request for de-registration from said application server via a direct interface,”* as recited in claim 1.

The Final Office Action correctly concluded that 3GPP fails to disclose or suggest a direct interface between an application server and a registration server via a direct interface. (See Final Office Action at pages 3-4). Thus, there is no dispute that 3GPP fails to disclose, or suggest, at least, the aforementioned element of claim 1.

Furthermore, contrary to the Final Office Action’s position, Kett does not cure the deficiencies of 3GPP. As previously discussed, Kett describes a registration server implementing an application programming interface (API) which authenticates services and provides discover of network resources, prior to registering services with selected network resources. A network which includes an API between service components embedded in the network and applications running at the edge of the network has been developed by the Parlay Organization (“Parlay interface”). (See Kett at paragraph 0005). Kett discloses a communications network which includes an access network 1, a core

network 2, and a registration server 5 connected to the network, and used in implementing an API to network resources (i.e. a Parlay interface). (See Kett at paragraph 0027). The Parlay interface is objection-oriented and is implemented using service interfaces and framework interfaces. The service interface provide applications access to the network. The framework interface implements processes of authentication, discovery, and registration. As illustrated in Figure 4 of Kett, there is a direct interface 4.2 between client applications and Parlay services. However, these direct interfaces 4.2 are only accessed after an application has signed-on via the framework interface 4.1. (See Kett at paragraph 0030, Figure 4).

The Final Office Action cites paragraphs 0030-0033 of Kett as allegedly disclosing a direct interface between an application server and a registration server. (See Final Office Action at page 4). However, Appellants respectfully submit that neither framework interface 4.1, nor direct interface 4.2 disclose, or suggest, a direct interface between an application server and a registration server. Specifically, framework interface 4.1 is an interface between the framework objects in the network domain and the client framework objects in the user domain, and is not an interface between an application server and a registration server. Furthermore, direct interface 4.2 is an interface between a client application and a Parlay service of the Parlay API, and is also not an interface between an application server and a registration. Instead, the client application signs-on with the Parlay API via the registration server. A Parlay authentication objection is instantiated on the registration server and provides an authentication interface that enables mutual authentication of the registration server and the client application. (See Kett at paragraphs 0030 and 0032; Figure 4).

The Advisory Action took the position that Kett is relied upon to teach the element of the claim “*via a direct interface.*” (See Advisory Action at page 2). However, independent claim 1 clearly recites “*forwarding a request for de-registration from said application server via a direct interface to a registration server.*” Thus, the plain language of the claim indicates that the direct interface is between the application server and the registration server. As previously discussed, Kett fails to disclose, or suggest, a direct interface between an application server and a registration server. Thus, Kett fails to disclose, or suggest, at least, “*forwarding a request for de-registration from said application server via a direct interface,*” as recited in claim 1.

Furthermore, Appellants respectfully submit that the Final Office Action’s statement that one of ordinary skill in the art would be motivated to combine the references of 3GPP and Kett to arrive at the claimed invention to improve the function and performance of API implementation in a communication network fails to take into account the substantial differences between Kett and the claimed invention. (See Final Office Action at Page 4). For example, Kett teaches a registration procedure, rather than a de-registration procedure, and Kett also teaches an API implementation. Thus, the stated motivation would lead to an API implementation in the registration procedure of the 3GPP configuration, and not to a direct interface between an application server and a registration server, as recited in claim 1.

Appellants further submit there is no motivation or suggestion in 3GPP which would allow a person of ordinary skill in the art to use the teaching of a registration procedure based on an API implementation, such as disclosed in Kett, in order to provide the de-registration or barring procedure of the claimed invention. Likewise, there is no

motivation or suggestion in Kett which would allow a person of ordinary skill in the art to use the teaching of a de-registration procedure without API implementation, such as disclosed in 3GPP, in order to provide the de-registration or baring procedure of the claimed invention.

Accordingly, Appellants respectfully submit that 3GPP and Kett, whether considered individually or in combination, fail to disclose, or suggest, “*forwarding a request for de-registration from said application server via a direct interface*,” as recited in claim 1. Therefore, it is respectfully requested that this rejection be reversed and the claim allowed.

#### ii) Claim 2

Claim 2 is dependent on claim 1, and recites further limitations. Thus, claim 2 is patentable at least for the reasons claim 1 is patentable, and further, because it recites additional limitations.

Specifically, claim 2 recites “*wherein said forwarding step comprises forwarding said request over said interface directly coupling said application server and said registration server*.” The Final Office Action relied upon two separate portions of 3GPP to support its erroneous position that 3GPP discloses the aforementioned limitation. The Final Office Action first relied upon page 43, Figure. 5.5a as allegedly disclosing forwarding a request, and relied upon pages 14-17, Section 4.2.4 as allegedly disclosing an interface directly coupling an application server and an registration server. (See Final Office Action at page 4). Section 4.2.4 describes an ISC interface between a Serving CSCF and a service platform, and Sh and Si interfaces used for communications

between the application server and the home subscriber server (“HSS”). (See 3GPP at pages 14-17, Section 4.2.4). However, 3GPP fails to describe a registration message being sent over the Sh and Si interfaces. Instead, 3GPP merely describes that the S-CSCF receives de-registration information from the service platform and issues a de-registration towards the P-CSCF. (See 3GPP at page 43, section 5.3.2.2.2, Figure 4.4a). Because the claim explicitly recites that the request is forwarded over the interface directly coupling the application server and the registration server, Appellants respectfully submit that 3GPP fails to disclose, or suggest, the aforementioned limitation. Furthermore, Kett fails to cure the deficiencies of 3GPP because, as previously discussed, Kett merely discusses a direct interface between an application and a Parlay service, and fails to disclose an interface directly coupling an application server and a registration server.

Therefore, it is respectfully requested that this rejection be reversed and the claim allowed.

### iii) Claim 3

Claim 3 is dependent on claim 1, and recites further limitations. Thus, claim 3 is patentable at least for the reasons claim 1 is patentable, and further, because it recites additional limitations. Accordingly, it is respectfully requested that this rejection be reversed and the claim allowed.

### iv) Claim 4

Claim 4 is dependent on claim 1, and recites further limitations. Thus, claim 4 is



patentable at least for the reasons claim 1 is patentable, and further, because it recites additional limitations. Accordingly, it is respectfully requested that this rejection be reversed and the claim allowed.

v) Claim 5

Claim 5 is dependent on claim 1, and recites further limitations. Thus, claim 5 is patentable at least for the reasons claim 1 is patentable, and further, because it recites additional limitations. Accordingly, it is respectfully requested that this rejection be reversed and the claim allowed.

vi) Claim 6

Claim 6 is dependent on claim 1, and recites further limitations. Thus, claim 6 is patentable at least for the reasons claim 1 is patentable, and further, because it recites additional limitations. Accordingly, it is respectfully requested that this rejection be reversed and the claim allowed.

vii) Claim 8

Claim 8 recites a system for deactivating a service account of a registered subscriber within a signaling network supporting internet protocol based services. The system includes a registration server configured to maintain a registration status of said subscriber. The system further includes an application server, to which said service account is associated, configured to monitor a status of said service account and to forward via a direct interface a request for de-registration to said registration server, upon

determining that disruption or termination of service is required. The registration server is configured to change the registration status of said subscriber so as to de-register said subscriber in response to said de-registration request.

The descriptions of 3GPP and Kett, as discussed above are incorporated herein. While each of the claims have their own scope, Appellants respectfully submit that 3GPP and Kett, whether considered individually or in combination, fail to disclose, or suggest, at least, *“an application server, to which said service account is associated, configured to monitor a status of said service account and to forward via a direct interface a request for de-registration to said registration server,”* as recited in claim 8 for similar reasons as to why the combination of 3GPP and Kett fails to disclose, or suggest, at least, *“forwarding a request for de-registration from said application server via a direct interface,”* as recited in claim 1, as discussed in Section VII, i.

Therefore, it is respectfully requested that this rejection be reversed and the claim allowed.

#### viii) Claim 9

Claim 9 is dependent on claim 8, and recites further limitations. Thus, claim 9 is patentable at least for the reasons claim 8 is patentable, and further, because it recites additional limitations. Accordingly, it is respectfully requested that this rejection be reversed and the claim allowed.

#### ix) Claim 10

Claim 10 is dependent on claim 8, and recites further limitations. Thus, claim 10 is

patentable at least for the reasons claim 8 is patentable, and further, because it recites additional limitations. Accordingly, it is respectfully requested that this rejection be reversed and the claim allowed.

x) Claim 11

Claim 11 recites a method of deactivating a service account associated with an application server of a registered subscriber within a signaling network supporting internet protocol based services. The method includes monitoring a status of said service account. The method further includes forwarding a request for barring from said application server via a direct interface to a registration server, which maintains a registration status of said subscriber, upon determining that disruption or termination of service is required. The method further includes changing a barring indication of said subscriber so as to bar said subscriber at said registration server by changing said barring indication in response to said barring request.

The descriptions of 3GPP and Kett, as discussed above are incorporated herein. While each of the claims have their own scope, Appellants respectfully submit that 3GPP and Kett, whether considered individually or in combination, fail to disclose, or suggest, at least, *"forwarding a request for barring from said application server via a direct interface to a registration server,"* as recited in claim 11 for similar reasons as to why the combination of 3GPP and Kett fails to disclose, or suggest, at least, *"forwarding a request for de-registration from said application server via a direct interface,"* as recited in claim 1, as discussed in Section VII, i.

Therefore, it is respectfully requested that this rejection be reversed and the claim

allowed.

xi) Claim 12

Claim 12 is dependent on claim 11, and recites further limitations. Thus, claim 12 is patentable at least for the reasons claim 11 is patentable, and further, because it recites additional limitations. Accordingly, it is respectfully requested that this rejection be reversed and the claim allowed.

xii) Claim 13

Claim 13 is dependent on claim 11, and recites further limitations. Thus, claim 13 is patentable at least for the reasons claim 11 is patentable, and further, because it recites additional limitations. Accordingly, it is respectfully requested that this rejection be reversed and the claim allowed.

xiii) Claim 14

Claim 14 is dependent on claim 11, and recites further limitations. Thus, claim 14 is patentable at least for the reasons claim 11 is patentable, and further, because it recites additional limitations. Accordingly, it is respectfully requested that this rejection be reversed and the claim allowed.

xiv) Claim 15

Claim 15 recites a system for deactivating a service account of a registered subscriber within a signaling network supporting internet protocol based services. The

system includes a registration server configured to maintain a registration status of said subscriber. The system further includes an application server, to which said service account is associated, configured to monitor a status of said service account and to forward via a direct interface a request for barring to said registration server, upon determining that disruption or termination of service is required. The registration server is configured to change a barring indication of said subscriber to bar said subscriber in response to said barring request.

The descriptions of 3GPP and Kett, as discussed above are incorporated herein. While each of the claims have their own scope, Appellants respectfully submit that 3GPP and Kett, whether considered individually or in combination, fail to disclose, or suggest, at least, *“an application server, to which said service account is associated, configured to monitor a status of said service account and to forward via a direct interface a request for barring to said registration server,”* as recited in claim 15 for similar reasons as to why the combination of 3GPP and Kett fails to disclose, or suggest, at least, *“forwarding a request for de-registration from said application server via a direct interface,”* as recited in claim 1, as discussed in Section VII, i.

Therefore, it is respectfully requested that this rejection be reversed and the claim allowed.

#### xv) Claim 16

Claim 16 recites a system for deactivating a service account associated with an application server of a registered subscriber within a signaling network supporting internet protocol based services. The system includes monitoring means for monitoring

a status of said service account. The system further includes forwarding means for forwarding a request for de-registration from said application server via a direct interface to a registration server, which maintains a registration status of said subscriber, upon determining that disruption or termination of service is required. The system further includes changing means for changing the registration status of said subscriber so as to deregister said subscriber at said registration server in response to de-registration request.

The descriptions of 3GPP and Kett, as discussed above are incorporated herein. While each of the claims have their own scope, Appellants respectfully submit that 3GPP and Kett, whether considered individually or in combination, fail to disclose, or suggest, at least, *“forwarding means for forwarding a request for de-registration from said application server via a direct interface to a registration server,”* as recited in claim 16 for similar reasons as to why the combination of 3GPP and Kett fails to disclose, or suggest, at least, *“forwarding a request for de-registration from said application server via a direct interface,”* as recited in claim 1, as discussed in Section VII, i.

Therefore, it is respectfully requested that this rejection be reversed and the claim allowed.

xvi) Claim 17

Claim 17 recites a system for deactivating a service account associated with an application server of a registered subscriber within a signaling network supporting internet protocol based services. The system includes monitoring means for monitoring a status of said service account. The system further includes forwarding means for

forwarding a request for barring from said application server via a direct interface to a registration server, which maintains a registration status of said subscriber, upon determining that disruption or termination of service is required. The system further includes changing means for changing a barring indication of said subscriber so as to bar said subscriber at said registration server by changing said barring indication in response to said barring request..

The descriptions of 3GPP and Kett, as discussed above are incorporated herein. While each of the claims have their own scope, Appellants respectfully submit that 3GPP and Kett, whether considered individually or in combination, fail to disclose, or suggest, at least, *“forwarding means for forwarding a request for barring from said application server via a direct interface to a registration server,”* as recited in claim 17 for similar reasons as to why the combination of 3GPP and Kett fails to disclose, or suggest, at least, *“forwarding a request for de-registration from said application server via a direct interface,”* as recited in claim 1, as discussed in Section VII, i.

Therefore, it is respectfully requested that this rejection be reversed and the claim allowed.

xvii) Claim 18

Claim 18 is dependent on claim 1, and recites further limitations. Thus, claim 18 is patentable at least for the reasons claim 11 is patentable, and further, because it recites additional limitations.

Specifically, claim 18 recites *“wherein said forwarding comprises forwarding said request over said interface directly coupling said application server and said registration*

server.” The Final Office Action relied upon two separate portions of 3GPP to support its erroneous position that 3GPP discloses the aforementioned limitation. The Final Office Action first relied upon page 43, Figure. 5.5a as allegedly disclosing forwarding a request, and relied upon pages 14-17, Section 4.2.4 as allegedly disclosing an interface directly coupling an application server and an registration server. (See Final Office Action at page 4). Section 4.2.4 describes an ISC interface between a Serving CSCF and a service platform, and Sh and Si interfaces used for communications between the application server and the home subscriber server (“HSS”). (See 3GPP at pages 14-17, Section 4.2.4). However, 3GPP fails to describe a registration message being sent over the Sh and Si interfaces. Instead, 3GPP merely describes that the S-CSCF receives de-registration information from the service platform and issues a de-registration towards the P-CSCF. (See 3GPP at page 43, section 5.3.2.2.2, Figure 4.4a). Because the claim explicitly recites that the request is forwarded over the interface directly coupling the application server and the registration server, Appellants respectfully submit that 3GPP fails to disclose, or suggest, the aforementioned limitation. Furthermore, Kett fails to cure the deficiencies of 3GPP because, as previously discussed, Kett merely discusses a direct interface between an application and a Parlay service, and fails to disclose an interface directly coupling an application server and a registration server.

Therefore, it is respectfully requested that this rejection be reversed and the claim allowed.

xviii) Claim 19

Claim 19 is dependent on claim 11, and recites further limitations. Thus, claim 19



is patentable at least for the reasons claim 11 is patentable, and further, because it recites additional limitations. Accordingly, it is respectfully requested that this rejection be reversed and the claim allowed.

xix) Claim 20

Claim 20 recites a method of deactivating a service account associated with an application server of a registered subscriber within a signaling network supporting internet protocol based services. The method includes monitoring a status of a service account. The method further includes forwarding a request for de-registration from said application server via a direct interface to a registration server upon determining that disruption or termination of service is required. The registration server maintains a registration status of said subscriber. The registration server changes said registration status of said subscriber so as to de-register said subscriber at said registration server in response to said de-registration request.

The descriptions of 3GPP and Kett, as discussed above are incorporated herein. While each of the claims have their own scope, Appellants respectfully submit that 3GPP and Kett, whether considered individually or in combination, fail to disclose, or suggest, at least, *“forwarding a request for de-registration from said application server via a direct interface to a registration server,”* as recited in claim 20 for similar reasons as to why the combination of 3GPP and Kett fails to disclose, or suggest, at least, *“forwarding a request for de-registration from said application server via a direct interface,”* as recited in claim 1, as discussed in Section VII, i.

Therefore, it is respectfully requested that this rejection be reversed and the claim

allowed.

xx) Claim 21

Claim 21 is dependent on claim 20, and recites further limitations. Thus, claim 21 is patentable at least for the reasons claim 20 is patentable, and further, because it recites additional limitations.

Specifically, claim 21 recites “*wherein said forwarding comprises forwarding said request over said interface directly coupling said application server and said registration server.*” The Final Office Action relied upon two separate portions of 3GPP to support its erroneous position that 3GPP discloses the aforementioned limitation. The Final Office Action first relied upon page 43, Figure. 5.5a as allegedly disclosing forwarding a request, and relied upon pages 14-17, Section 4.2.4 as allegedly disclosing an interface directly coupling an application server and an registration server. (See Final Office Action at page 4). Section 4.2.4 describes an ISC interface between a Serving CSCF and a service platform, and Sh and Si interfaces used for communications between the application server and the home subscriber server (“HSS”). (See 3GPP at pages 14-17, Section 4.2.4). However, 3GPP fails to describe a registration message being sent over the Sh and Si interfaces. Instead, 3GPP merely describes that the S-CSCF receives de-registration information from the service platform and issues a de-registration towards the P-CSCF. (See 3GPP at page 43, section 5.3.2.2.2, Figure 4.4a). Because the claim explicitly recites that the request is forwarded over the interface directly coupling the application server and the registration server, Appellants respectfully submit that 3GPP fails to disclose, or suggest, the aforementioned limitation. Furthermore, Kett fails to cure

the deficiencies of 3GPP because, as previously discussed, Kett merely discusses a direct interface between an application and a Parlay service, and fails to disclose an interface directly coupling an application server and a registration server.

Therefore, it is respectfully requested that this rejection be reversed and the claim allowed.

xxi) Claim 22

Claim 22 is dependent on claim 20, and recites further limitations. Thus, claim 22 is patentable at least for the reasons claim 20 is patentable, and further, because it recites additional limitations. Accordingly, it is respectfully requested that this rejection be reversed and the claim allowed.

xxii) Claim 23

Claim 3 is dependent on claim 20, and recites further limitations. Thus, claim 23 is patentable at least for the reasons claim 20 is patentable, and further, because it recites additional limitations. Accordingly, it is respectfully requested that this rejection be reversed and the claim allowed.

xxiii) Claim 24

Claim 24 is dependent on claim 20, and recites further limitations. Thus, claim 24 is patentable at least for the reasons claim 20 is patentable, and further, because it recites additional limitations. Accordingly, it is respectfully requested that this rejection be reversed and the claim allowed.

xxiv) Claim 25

Claim 25 recites a method of deactivating a service account associated with an application server of a registered subscriber within a signaling network supporting internet protocol based services. The method includes receiving from said application server via a direct interface a request for de-registration at a registration server, which maintains a registration status of said subscriber. The method further includes changing the registration status of said subscriber so as to de-register said subscriber at said registration server in response to said de-registration request.

The descriptions of 3GPP and Kett, as discussed above are incorporated herein. While each of the claims have their own scope, Appellants respectfully submit that 3GPP and Kett, whether considered individually or in combination, fail to disclose, or suggest, at least, *“receiving from said application server via a direct interface a request for de-registration at a registration server,”* as recited in claim 25 for similar reasons as to why the combination of 3GPP and Kett fails to disclose, or suggest, at least, *“forwarding a request for de-registration from said application server via a direct interface,”* as recited in claim 1, as discussed in Section VII, i.

Therefore, it is respectfully requested that this rejection be reversed and the claim allowed.

xxv) Claim 26

Claim 26 is dependent on claim 25, and recites further limitations. Thus, claim 26 is patentable at least for the reasons claim 25 is patentable, and further, because it

recites additional limitations. Accordingly, it is respectfully requested that this rejection be reversed and the claim allowed.

xxvi) Claim 27

Claim 27 recites a method of deactivating a service account associated with an application server of a registered subscriber within a signaling network supporting internet protocol based services. The method includes monitoring a status of said service account. The method further includes forwarding a request for barring from said application server via a direct interface to a registration server upon determining that disruption or termination of service is required. The registration server maintains a registration status of said subscriber. The registration server changes a barring indication of said subscriber so as to bar said subscriber at said registration server by changing said barring indication in response to said barring request.

The descriptions of 3GPP and Kett, as discussed above are incorporated herein. While each of the claims have their own scope, Appellants respectfully submit that 3GPP and Kett, whether considered individually or in combination, fail to disclose, or suggest, at least, *“forwarding a request for barring from said application server via a direct interface to a registration server,”* as recited in claim 27 for similar reasons as to why the combination of 3GPP and Kett fails to disclose, or suggest, at least, *“forwarding a request for de-registration from said application server via a direct interface,”* as recited in claim 1, as discussed in Section VII, i.

Therefore, it is respectfully requested that this rejection be reversed and the claim allowed.

xxvii) Claim 28

Claim 28 is dependent on claim 27, and recites further limitations. Thus, claim 28 is patentable at least for the reasons claim 27 is patentable, and further, because it recites additional limitations. Accordingly, it is respectfully requested that this rejection be reversed and the claim allowed.

xxviii) Claim 29

Claim 29 is dependent on claim 27, and recites further limitations. Thus, claim 29 is patentable at least for the reasons claim 27 is patentable, and further, because it recites additional limitations. Accordingly, it is respectfully requested that this rejection be reversed and the claim allowed.

xxix) Claim 30

Claim 30 recites a method of deactivating a service account associated with an application server of a registered subscriber within a signaling network supporting internet protocol based services. The method includes receiving from said application server via a direct interface a request for barring to a registration server, which maintains a registration status of said subscriber. The method further includes changing a barring indication of said subscriber so as to bar said subscriber at said registration server by changing said barring indication in response to said barring request.

The descriptions of 3GPP and Kett, as discussed above are incorporated herein. While each of the claims have their own scope, Appellants respectfully submit that 3GPP

and Kett, whether considered individually or in combination, fail to disclose, or suggest, at least, *“receiving from said application server via a direct interface a request for barring to a registration server,”* as recited in claim 30 for similar reasons as to why the combination of 3GPP and Kett fails to disclose, or suggest, at least, *“forwarding a request for de-registration from said application server via a direct interface,”* as recited in claim 1, as discussed in Section VII, i.

Therefore, it is respectfully requested that this rejection be reversed and the claim allowed.

xxx) Claim 31

Claim 31 is dependent on claim 30, and recites further limitations. Thus, claim 31 is patentable at least for the reasons claim 30 is patentable, and further, because it recites additional limitations. Accordingly, it is respectfully requested that this rejection be reversed and the claim allowed.

xxxi) Claim 32

Claim 32 recites a registration server for deactivating a service account of a registered subscriber. The registration server includes a storage configured to maintain a registration status of said subscriber. The registration server further includes an updating unit configured to change the registration status of said subscriber so as to de-register said subscriber in response to a de-registration request forwarded from an application server via a direct interface to said registration server.

The descriptions of 3GPP and Kett, as discussed above are incorporated herein.

While each of the claims have their own scope, Appellants respectfully submit that 3GPP and Kett, whether considered individually or in combination, fail to disclose, or suggest, at least, *“an updating unit configured to change the registration status of said subscriber so as to de-register said subscriber in response to a de-registration request forwarded from an application server via a direct interface to said registration server,”* as recited in claim 32 for similar reasons as to why the combination of 3GPP and Kett fails to disclose, or suggest, at least, *“forwarding a request for de-registration from said application server via a direct interface,”* as recited in claim 1, as discussed in Section VII, i.

Therefore, it is respectfully requested that this rejection be reversed and the claim allowed.

xxxii) Claim 33

Claim 33 is dependent on claim 32, and recites further limitations. Thus, claim 33 is patentable at least for the reasons claim 32 is patentable, and further, because it recites additional limitations. Accordingly, it is respectfully requested that this rejection be reversed and the claim allowed.

xxxiii) Claim 34

Claim 34 recites a registration server for deactivating a service account of a registered subscriber. The registration server includes means for maintaining a registration status of said subscriber. The registration server further includes means for changing the registration status of said subscriber so as to de-register said subscriber in response to a de-registration request forwarded from an application server via a direct



interface to said registration server.

The descriptions of 3GPP and Kett, as discussed above are incorporated herein. While each of the claims have their own scope, Appellants respectfully submit that 3GPP and Kett, whether considered individually or in combination, fail to disclose, or suggest, at least, *“means for changing the registration status of said subscriber so as to de-register said subscriber in response to a de-registration request forwarded from an application server via a direct interface to said registration server,”* as recited in claim 34 for similar reasons as to why the combination of 3GPP and Kett fails to disclose, or suggest, at least, *“forwarding a request for de-registration from said application server via a direct interface,”* as recited in claim 1, as discussed in Section VII, i.

Therefore, it is respectfully requested that this rejection be reversed and the claim allowed.

#### xxxiv) Claim 35

Claim 35 recites an application server for deactivating a service account of a registered subscriber. The application server includes a forwarding unit configured to forward a request for de-registration from said application server via a direct interface to a registration server, upon determining that disruption or termination of service is required.

The descriptions of 3GPP and Kett, as discussed above are incorporated herein. While each of the claims have their own scope, Appellants respectfully submit that 3GPP and Kett, whether considered individually or in combination, fail to disclose, or suggest, at least, *“a forwarding unit configured to forward a request for de-registration from said*

*application server via a direct interface to a registration server,” as recited in claim 35 for similar reasons as to why the combination of 3GPP and Kett fails to disclose, or suggest, at least, “forwarding a request for de-registration from said application server via a direct interface,” as recited in claim 1, as discussed in Section VII, i.*

Therefore, it is respectfully requested that this rejection be reversed and the claim allowed.

xxxv) Claim 36

Claim 36 recites an application server for deactivating a service account of a registered subscriber. The application server includes means for monitoring a status of said service account. The application server further includes means for forwarding a request for de-registration from said application server via a direct interface to a registration server, upon determining that disruption or termination of service is required.

The descriptions of 3GPP and Kett, as discussed above are incorporated herein. While each of the claims have their own scope, Appellants respectfully submit that 3GPP and Kett, whether considered individually or in combination, fail to disclose, or suggest, at least, *“means for forwarding a request for de-registration from said application server via a direct interface to a registration server,”* as recited in claim 36 for similar reasons as to why the combination of 3GPP and Kett fails to disclose, or suggest, at least, *“forwarding a request for de-registration from said application server via a direct interface,”* as recited in claim 1, as discussed in Section VII, i.

Therefore, it is respectfully requested that this rejection be reversed and the claim allowed.

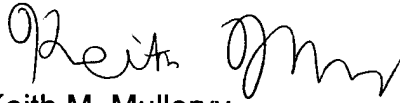
For all of the above noted reasons, it is strongly contended that certain clear differences exist between the present invention as claimed in claims 1-6 and 8-36 and the prior art relied upon by the Examiner. It is further contended that these differences are more than sufficient that the present invention would not have been obvious to a person having ordinary skill in the art at the time the invention was made.

This final rejection being in error, therefore, it is respectfully requested that this honorable Board of Patent Appeals and Interferences reverse the Examiner's decision in this case and indicate the allowability of application claims 1-6 and 8-36.

In the event that this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees which may be due with respect to this paper may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

SQUIRE, SANDERS & DEMPSEY LLP



Keith M. Mullervy  
Attorney for Applicant(s)  
Registration No. 62,382

Atty. Docket No.: 047092.00073

8000 Towers Crescent Drive, 14<sup>th</sup> Floor  
Vienna, VA 22182-6212  
Tel: (703) 720-7800  
Fax (703) 720-7802

KMM:sew

Encls: Appendix 1 - Claims on Appeal  
Appendix 2 - Evidence  
Appendix 3 - Related Proceedings

## APPENDIX 1

### CLAIMS ON APPEAL

1. (Previously Presented) A method of deactivating a service account associated with an application server of a registered subscriber within a signaling network supporting internet protocol based services, the method comprising:

monitoring a status of a service account;

forwarding a request for de-registration from said application server via a direct interface to a registration server, which maintains a registration status of said subscriber, upon determining that disruption or termination of service is required; and

changing the registration status of said subscriber so as to de-register said subscriber at said registration server in response to said de-registration request.

2. (Previously Presented) A method according to claim 1, wherein said forwarding step comprises forwarding said request over said interface directly coupling said application server and said registration server.

3. (Previously Presented) A method according to claim 1, wherein said forwarding comprises forwarding said request to said registration server comprising a home subscriber server of an internet protocol multimedia subsystem.

4. (Previously Presented) A method according to claim 3, wherein said forwarding comprises forwarding said request over said interface comprising an Sh reference point.

5. (Previously Presented) A method according to claim 3, wherein said forwarding comprises forwarding said request in a profile update request command.

6. (Previously Presented) A method according to claim 5, further comprising indicating de-registration by setting an updated registration status to a predetermined value.

7. (Cancelled)

8. (Previously Presented) A system for deactivating a service account of a registered subscriber within a signaling network supporting internet protocol based services, said system comprising:

a registration server configured to maintain a registration status of said subscriber;  
and

an application server, to which said service account is associated, configured to monitor a status of said service account and to forward via a direct interface a request for de-registration to said registration server, upon determining that disruption or termination of service is required,

wherein said registration server is configured to change the registration status of said subscriber so as to de-register said subscriber in response to said de-registration request.

9. (Original) A system according to 8, wherein said registration server is a home subscriber server.

10. (Original) A system according to 8, wherein said signaling network comprises an internet protocol multimedia subsystem.

11. (Previously Presented) A method of deactivating a service account associated with an application server of a registered subscriber within a signaling network supporting internet protocol based services, the method comprising:

monitoring a status of said service account;

forwarding a request for barring from said application server via a direct interface to a registration server, which maintains a registration status of said subscriber, upon determining that disruption or termination of service is required; and

changing a barring indication of said subscriber so as to bar said subscriber at said registration server by changing said barring indication in response to said barring request.

12. (Previously Presented) A method according to claim 11, wherein said forwarding comprises forwarding said request to said registration server comprising a home subscriber server of an internet protocol multimedia subsystem.

13. (Previously Presented) A method according to claim 12, wherein said forwarding comprises forwarding said requests in a profile update request command.

14. (Previously Presented) A method according to claim 13, further comprising indicating barring by adding the barring indication to a definition of a public identity.

15. (Previously Presented) A system for deactivating a service account of a registered subscriber within a signaling network supporting internet protocol based services, said system comprising:

a registration server configured to maintain a registration status of said subscriber;  
and

an application server, to which said service account is associated, configured to monitor a status of said service account and to forward via a direct interface a request for barring to said registration server, upon determining that disruption or termination of service is required,

wherein said registration server is configured to change a barring indication of said subscriber to bar said subscriber in response to said barring request.

16. (Previously Presented) A system for deactivating a service account associated with an application server of a registered subscriber within a signaling network supporting internet protocol based services, the system comprising:

monitoring means for monitoring a status of said service account;

forwarding means for forwarding a request for de-registration from said application server via a direct interface to a registration server, which maintains a registration status of said subscriber, upon determining that disruption or termination of service is required;  
and



changing means for changing the registration status of said subscriber so as to deregister said subscriber at said registration server in response to de-registration request.

17. (Previously Presented) A system for deactivating a service account associated with an application server of a registered subscriber within a signaling network supporting internet protocol based services, the system comprising:

monitoring means for monitoring a status of said service account;

forwarding means for forwarding a request for barring from said application server via a direct interface to a registration server, which maintains a registration status of said subscriber, upon determining that disruption or termination of service is required; and

changing means for changing a barring indication of said subscriber so as to bar said subscriber at said registration server by changing said barring indication in response to said barring request.

18. (Previously Presented) A method according to claim 11, wherein said forwarding comprises forwarding said request over said interface directly coupling said application server and said registration server.

19. (Previously Presented) A method according to claim 12, wherein said forwarding comprises forwarding said request over said interface comprising an Sh reference point.

20. (Previously Presented) A method of deactivating a service account associated with an application server of a registered subscriber within a signaling network supporting internet protocol based services, the method comprising:

monitoring a status of a service account; and

forwarding a request for de-registration from said application server via a direct interface to a registration server upon determining that disruption or termination of service is required,

wherein the registration server maintains a registration status of said subscriber, and

wherein the registration server changes said registration status of said subscriber so as to de-register said subscriber at said registration server in response to said de-registration request.

21. (Previously Presented) A method according to claim 20, wherein said forwarding comprises forwarding said request over said interface directly coupling said application server and said registration server.

22. (Previously Presented) A method according to claim 20, wherein said forwarding comprises forwarding said request to said registration server comprising a home subscriber server of an internet protocol multimedia subsystem.

23. (Previously Presented) A method according to claim 22, wherein said forwarding comprises forwarding said request over said interface comprising an Sh

reference point.

24. (Previously Presented) A method according to claim 22, wherein said forwarding comprises forwarding said request in a profile update request command.

25. (Previously Presented) A method of deactivating a service account associated with an application server of a registered subscriber within a signaling network supporting internet protocol based services, the method comprising:

receiving from said application server via a direct interface a request for de-registration at a registration server, which maintains a registration status of said subscriber; and

changing the registration status of said subscriber so as to de-register said subscriber at said registration server in response to said de-registration request.

26. (Previously Presented) A method according to claim 25, further comprising indicating de-registration by setting an updated registration status to a predetermined value.

27. (Previously Presented) A method of deactivating a service account associated with an application server of a registered subscriber within a signaling network supporting internet protocol based services, the method comprising:

monitoring a status of said service account; and

forwarding a request for barring from said application server via a direct interface

to a registration server upon determining that disruption or termination of service is required,

wherein the registration server maintains a registration status of said subscriber,  
and wherein the registration server changes a barring indication of said subscriber so as to bar said subscriber at said registration server by changing said barring indication in response to said barring request.

28. (Previously Presented) A method according to claim 27, wherein said forwarding comprises forwarding said request to said registration server comprising a home subscriber server of an internet protocol multimedia subsystem.

29. (Previously Presented) A method according to claim 28, wherein said forwarding comprises forwarding said request in a profile update request command.

30. (Previously Presented) A method of deactivating a service account associated with an application server of a registered subscriber within a signaling network supporting internet protocol based services, the method comprising:

receiving from said application server via a direct interface a request for barring to a registration server, which maintains a registration status of said subscriber; and

changing a barring indication of said subscriber so as to bar said subscriber at said registration server by changing said barring indication in response to said barring request.

31. (Previously Presented) A method according to claim 30, further comprising

indicating barring by adding the barring indication to a definition of a public identity.

32. (Previously Presented) A registration server for deactivating a service account of a registered subscriber, said registration server comprising:

a storage configured to maintain a registration status of said subscriber; and

an updating unit configured to change the registration status of said subscriber so as to de-register said subscriber in response to a de-registration request forwarded from an application server via a direct interface to said registration server.

33. (Previously Presented) The registration server according to claim 32, wherein said registration server is a home subscriber server.

34. (Previously Presented) A registration server for deactivating a service account of a registered subscriber, said registration server comprising:

means for maintaining a registration status of said subscriber; and

means for changing the registration status of said subscriber so as to de-register said subscriber in response to a de-registration request forwarded from an application server via a direct interface to said registration server.

35. (Previously Presented) An application server for deactivating a service account of a registered subscriber, said application server comprising:

a forwarding unit configured to forward a request for de-registration from said application server via a direct interface to a registration server, upon determining that

disruption or termination of service is required.

36. (Previously Presented) An application server for deactivating a service account of a registered subscriber, said application server comprising:

means for monitoring a status of said service account; and

means for forwarding a request for de-registration from said application server via a direct interface to a registration server, upon determining that disruption or termination of service is required.

## **APPENDIX 2**

### **EVIDENCE APPENDIX**

No evidence under section 37 C.F.R. 1.130, 1.131, or 1.132 has been entered or will be relied upon by Appellants in this appeal.

## **APPENDIX 3**

### **RELATED PROCEEDINGS APPENDIX**

No decisions of the Board or of any court have been identified under 37 C.F.R.

§41.37(c)(1)(ii)